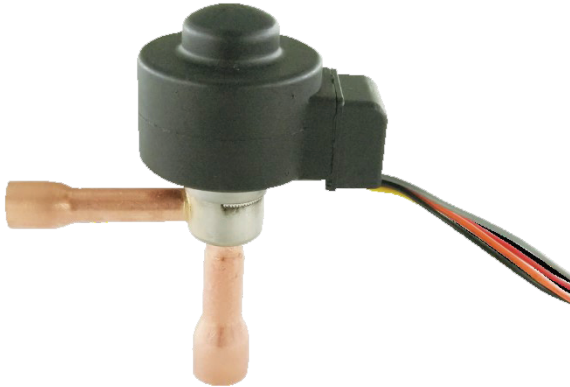


## LPF SERIES | *Electric Expansion Valve*



LPF series Electric Expansion Valves are designed for use in refrigeration systems. The valve port is designed with PTFE (Teflon™), creating a tight seat equivalent to a solenoid valve thus preventing liquid refrigerant from migrating to the evaporator and compressor.

### FEATURES

- TIGHT SEATING, AS GOOD AS A SOLENOID VALVE (<1ML/MIN)
- QUICK-CONNECT STATOR FOR EASY INSTALLATION
- IP67 RATED STATOR WORKS SAFELY IN HARSH ENVIRONMENTS
- COMPATIBLE WITH OIL-FREE SYSTEMS
- INLET STRAINER, 100 MESH
- LPFXXD: 870 PSIG [60 BAR(G)] DESIGN FOR R-744 (CO<sub>2</sub>) APPLICATION

### GENERAL SPECIFICATION

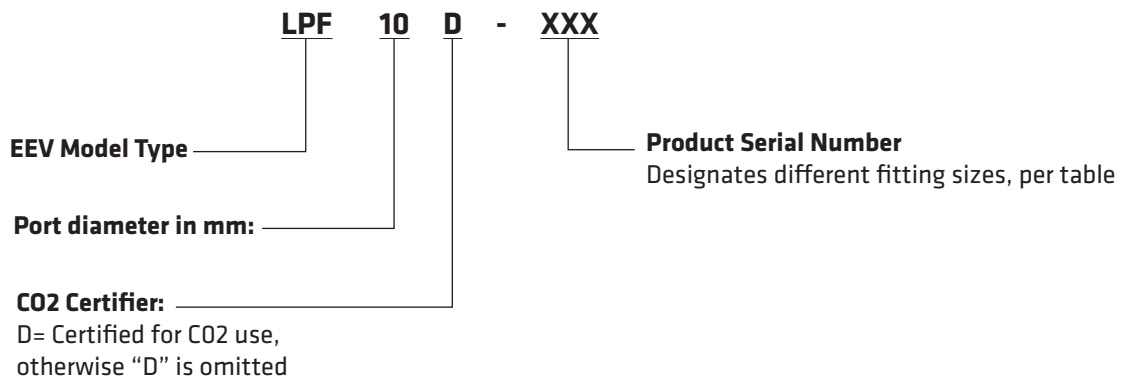
- Applicable for all common HCFC, HFC, HFO, and HC refrigerants and blends, including:
  - R-134a
  - R-404A
  - R-407A, R-407-C, R-407F
  - R-410A
  - R-448A, R-449A
  - R-450A
  - R-452A
  - R-513A
  - R-507A
  - R-744 (CO<sub>2</sub>)
- 500 steps (full stroke); 32 ± 20 opening steps
- Fluid temperature range: -40°F to +158°F
- Ambient temperature range: -40°F to +140°F
- Ambient relative humidity range: 0 to 95% RH
- Design Pressure:
  - 600 psig [41.4 bar(g)] max, MOPD: 500 psi [34.5 bar]
  - LPFxxD only: 870 psig [60.0 bar(g)] max, MOPD: 500 psi [34.5 bar]

## LPF SERIES | *Electric Expansion Valve*

### ELECTRICAL PARAMETERS

- Rated voltage: 12V DC ( $\pm 10\%$ ), rectangular wave
- Excitation mode: 1 - 2 phase excitation, unipolar actuation
- Excitation rate: 30 - 90pps
- Full stroke time: 6s @ 90pps
- Coil current: 260 mA/phase (20°C)
- Coil resistance:  $46 \pm 3.7 \Omega$ /phase (20°C)
- Insulation class of coil: E
- Protection class: IP 67
- Compatible with Sanhua SEC series controller

### MODEL DESIGNATION



## LPF SERIES | Electric Expansion Valve

### REFRIGERANT CAPACITY TABLES

#### Air Conditioning

Model No.	Refrigerant			
	R-407C		R-410A	
	ΔP=100 psi		ΔP=160 psi	
	tons	BTU/hr	tons	BTU/hr
LPF08	0.51	6,120	0.64	7,680
LPF10	0.85	10,200	1.06	12,720
LPF14	1.69	20,280	2.12	25,440
LPF18	2.54	30,480	3.18	38,160
LPF24	4.24	50,880	5.29	63,480

Conditions: 45°F evap temperature,  
100°F liquid temperature

#### CO2

Model No.	Refrigerant			
	R-744 (CO2)			
	MT		LT	
	tons	BTU/hr	tons	BTU/hr
LPF08D	1.23	14,760	1.91	22,920
LPF10D	2.05	24,600	3.19	38,280
LPF14D	4.10	49,200	6.38	76,560
LPF18D	6.14	73,680	9.57	114,840
LPF24D	10.20	122,400	15.90	190,800

MT = Medium Temperature: 25°F evap temperature,  
45°F liquid temperature ΔP=150 psi  
LT=Low Temperature: -10°F evap temperature,  
45°F liquid temperature ΔP=350 psi

Note:

1. LPF stator is sold separately
2. Nominal capacity is at 480 fully open pulses of linear flow curve

#### Medium Temperature Refrigeration

Model No.	Refrigerant															
	R-404A/ R-507		R-290		R-407A/ R-407F		R-448A/ R-449A		R-452A		R-134a		R-450A		R-513A	
	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr
LPF08	0.37	4,440	0.65	7,800	0.50	6,000	0.50	6,000	0.38	4,560	0.43	5,160	0.40	4,800	0.35	4,200
LPF10	0.62	7,440	1.08	12,960	0.84	10,080	0.84	10,080	0.63	7,560	0.72	8,640	0.67	8,040	0.59	7,080
LPF14	1.24	14,880	2.17	20,040	1.68	20,160	1.68	20,160	1.26	15,120	1.44	17,280	1.33	15,960	1.18	14,160
LPF18	1.86	22,320	3.25	39,000	2.52	30,240	2.52	30,240	1.89	22,680	2.16	25,920	2.00	24,000	1.77	21,240
LPF24	3.10	37,200	5.41	64,920	4.20	50,400	4.21	50,520	3.15	37,800	3.60	43,200	3.33	39,960	2.94	35,280

Conditions: 25°F evap temperature, 100°F liquid temperature

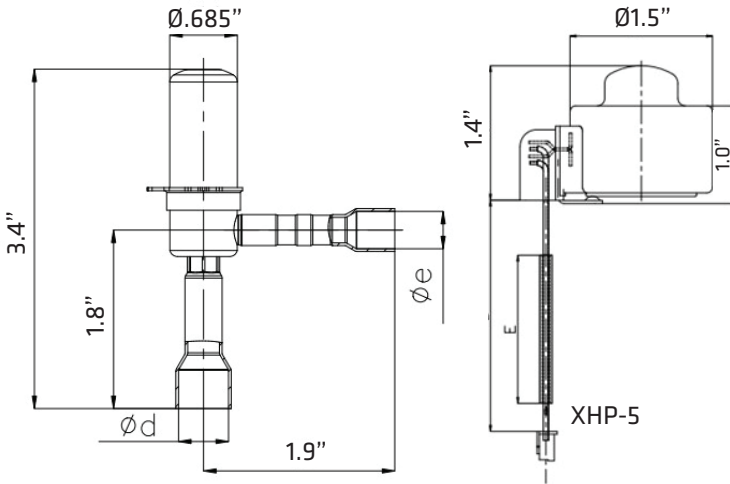
#### Low Temperature Refrigeration

Model No.	Refrigerant									
	R-404A/ R-507		R-290		R-407A/ R-407F		R-448A/ R-449A		R-452A	
	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr	tons	BTU/hr
LPF08	0.37	4,440	0.65	7,800	0.51	6,120	0.51	6,120	0.37	4,440
LPF10	0.61	7,320	1.09	13,080	0.85	10,200	0.85	10,200	0.62	7,440
LPF14	1.23	14,760	2.18	26,160	1.71	20,520	1.71	20,520	1.24	14,880
LPF18	1.84	22,080	3.26	39,120	2.56	30,720	2.56	30,720	1.86	22,320
LPF24	3.06	36,720	5.44	65,280	4.26	51,120	4.27	51,240	3.10	37,200

Conditions: -10°F evap temperature, 100°F liquid temperature

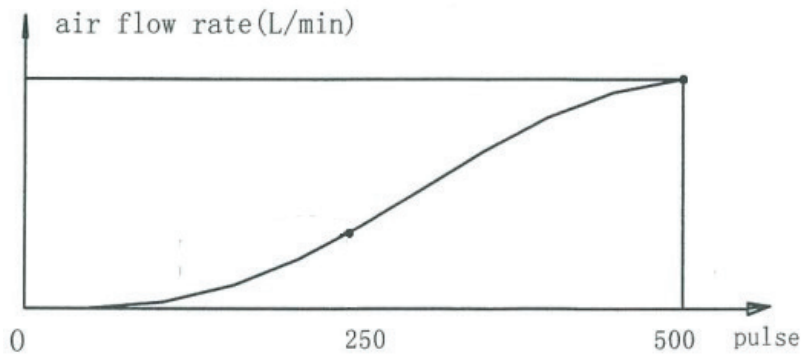
## LPF SERIES | Electric Expansion Valve

### TECHNICAL DATA



Valve Model	Dimensions		Weights Oz (g)
	$\phi e$ inlet	$\phi d$ outlet	
	inches	inches	
LPF08-001	3/8	1/2	1.8 (51.2)
LPF08-002	1/4	1/4	
LPF10-002/ LPF10D-002	3/8	1/2	
LPF10-003/ LPF10D-003	1/4	3/8	
LPF14-002/ LPF14D-002	3/8	1/2	
LPF14-003/ LPF14D-003	1/4	3/8	
LPF18-002/ LPF18D-002	3/8	1/2	
LPF24-002/ LPF24D-002	3/8	1/2	

Stator Model	D=Cable length ft (m)	E=Insulation length ft (m)	Number of wires	Weights Oz (g)
PQ-M24012-000007	5 (1.5)	4.6 (1.4)	5	4.95 (140.2)
PQ-M24012-000008	10 (3.0)	8.9 (2.7)	5	
PQ-M24012-000009	20 (6.0)	17.8 (5.4)	5	
PQ-M24012-000010	30 (9.0)	26.7 (8.1)	5	



UL Certified /CSA